
MASS, ISOTOPIC YIELDS AND KINETIC ENERGY MEASUREMENTS FOR $^{245}\text{Cm}(N_{th}, F)$

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The mass, charge yields and the kinetic energy distribution for the fission fragments from the thermal-neutron induced fission of ^{245}Cm were measured at the Lohengrin mass spectrometer at the Institut Laue Langevin, France. Using an ionization chamber coupled to the mass separator, we have measured data for the super-asymmetric mass region (from $A = 67$ to $A = 77$). These results of mass and isotopic yields are compared with those of other compound nuclei to highlight the shell effect at mass 70 for the $^{246}\text{Cm}^*$ compound-nucleus system. Furthermore, the proton odd-even effect is presented for the super-asymmetric fission and compared with previous results for $A > 80$. Mass yields and kinetic energy distributions for the heavy mass region (from $A = 130$ to $A = 167$), measured with the same method, are also presented. These experimental data are compared with the evaluations from the libraries JEF2.2 and ENDF/B-VI and with the A. Wahl's Z_p model. This considerably extends the data set previously known for the light and heavy mass peaks.